

## SECTION 2

### POTENTIAL MANAGEMENT SCENARIO FOR CONTINUED EXPLORATION AND DEVELOPMENT

#### 2.1 Introduction

Final decisions regarding how and to what extent natural gas development will proceed on Federal lands and minerals in the PAPA will be disclosed in the ROD. It is important to once again reiterate that an EIS is not a decision document but rather a means of disclosing to the public potential impacts from the project. However, BLM believes it is prudent to briefly summarize in the FEIS a potential management scenario for Federal lands and minerals in the PAPA. This potential management scenario has been developed based on careful consideration of resources within the PAPA as well as comments received from the public (including the operators) throughout the EIS process. The purpose for presenting this potential management scenario in the FEIS is to solicit additional public comment before the ROD is finalized.

As is documented throughout Chapter 3 of the DEIS, the PAPA contains a number of sensitive human/environmental resources which could be adversely affected by continued natural gas exploration and development activities. Many of these resources have been designated a Sensitive Resource Management Zone (SRMZ). Each SRMZ is described and mapped in detail in DEIS Chapters 2, 3 and 4.

When combined, these SRMZs cover nearly the entire PAPA, particularly in the northern two-thirds of the project area. Many of these SRMZs overlap making management of any particular area of the PAPA complicated. For instance, on the northern part of the PAPA, areas that have been identified as visually sensitive overlap with winter and crucial winter range for deer, residential areas, sage grouse lek buffers and nesting habitat, and the Mesa Breaks. To address the overlapping SRMZs, the BLM has divided the entire PAPA into 9 distinct Management Areas (MA) shown on Figure 2-1. MAs 1 through 8 apply to Federal lands and minerals. All non-Federal lands and minerals have been designated MA 9. Each of the MAs has similar yet different management objectives based on the combination of SRMZs present.

To allow for the development of natural gas in a reasonable balance with the resource management objectives for each MA, the development restrictions/limitations addressed in this section could be applied on Federal lands and minerals. Table 2-1 summarizes a potential management scenario for determining the maximum allowable level of well pad development within each MA. The maximum allowable level of development presented on Table 2-1 is based on adopting many of the protective measures outlined in the RP Alternative for Federal Lands and Minerals.

The right column in Table 2-1 is labeled ***Total Producing Well Pad Threshold***. Under the potential management scenario, if the threshold identified in this column is reached, no additional well pads would be authorized on Federal lands and minerals until additional environmental analysis has been completed that includes: 1) the evaluation of the effects of development, to-date, particularly upon the resources of management concern, but also on any resource affected by additional development (e.g., sensitive viewshed; big game animal populations, habitat quality and migration; sage grouse breeding and nesting; livestock grazing and trailing operations; cultural and Native American sacred sites; paleontology; highly erodible soils; raptor nesting habitat; sensitive plant species and other resources.); 2) identification of reasonable additional mitigation, if deemed necessary; and 3) additional public review and comment.

#### 2.2 Management Objectives and Restrictions/ Limitations Common to All Management Areas

This section describes management objectives and development limitations/restrictions that could be applied to all Federal lands and minerals in all MAs across the PAPA:

##### Objectives:

- Continue to promote active public participation in all aspects of future exploration and development.
- To the extent possible, eliminate undue and unnecessary disturbance/impacts (both direct and cumulative).

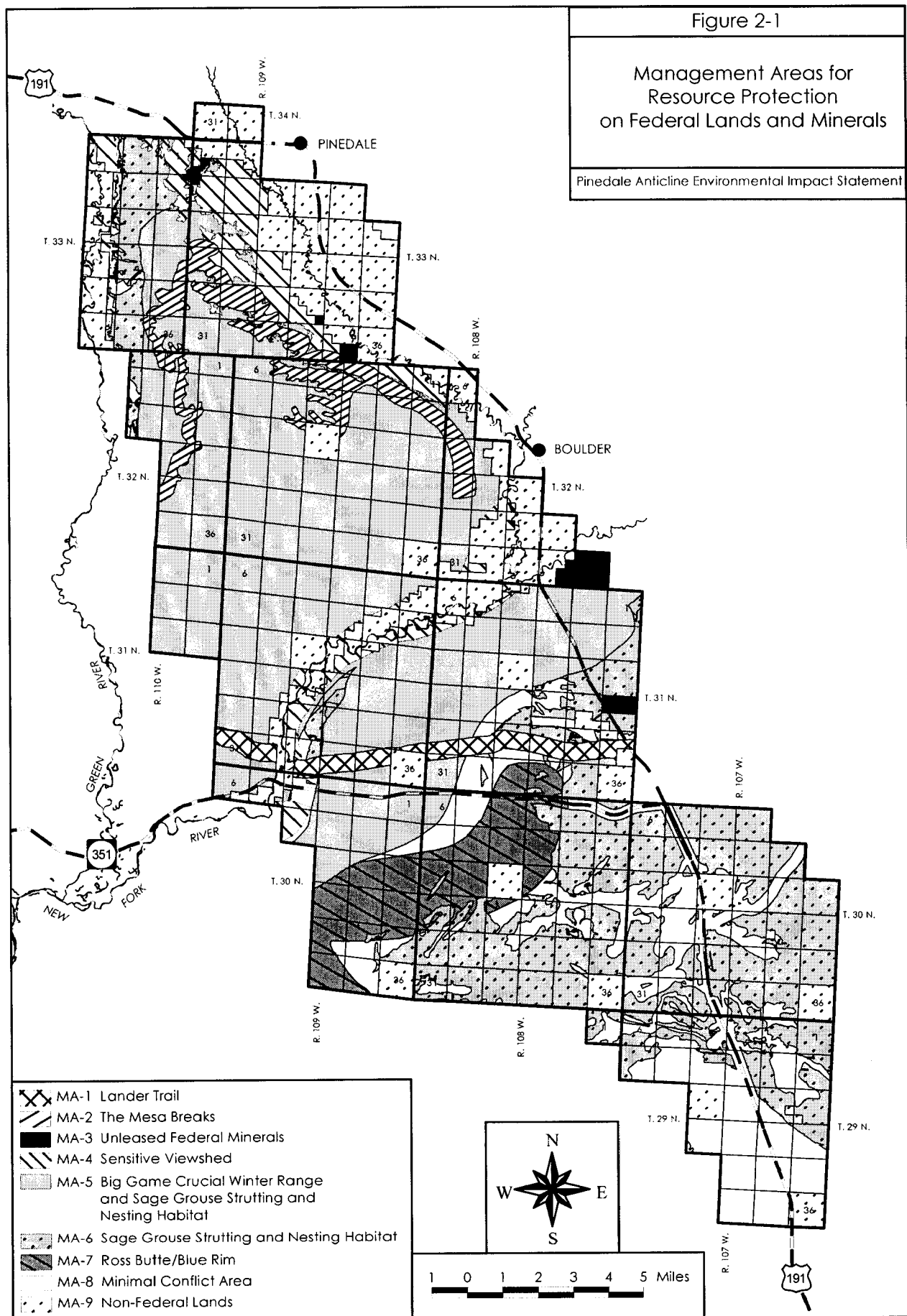


Table 2-1

## Potential Management Scenario - Maximum Allowable Level of Well Pad Development by Management Area

| Management Area   | Acres   | Average Number of Well Pads/Square Mile | Maximum Number of Well Pads/Square Mile | Total Producing Well Pad Threshold (7) |
|---|---------|---|---|--|
| 1 - Lander Trail (1)  | 3,460   | 0                                       | 0                                       | 0                                      |
| 2 - Mesa Breaks (1)   | 7,366   | 0                                       | 0                                       | 0                                      |
| 3 - Unleased Federal Minerals   | 1,347   | 0                                       | 0                                       | 0                                      |
| 4 - Sensitive Viewshed  | 8,686   | 2                                       | 4 (3)                                   | 28                                     |
| 5 - Big Game Winter Range and Sage Grouse Strutting and Nesting Habitat | 67,801  | 2                                       | 16 (4)                                  | 212                                    |
| 6 - Sage Grouse Strutting and Nesting Habitat                           | 39,205  | 3                                       | 16 (5)                                  | 183                                    |
| 7 - Ross Butte/Blue Rim   | 10,953  | 4                                       | 16 (6)                                  | 68                                     |
| 8 - Minimal Conflict Area   | 26,605  | 4                                       | 16                                      | 168                                    |
| 9 - Non-Federal Lands (2)   | 31,925  | 4                                       | 16                                      | 200                                    |
| TOTAL   | 197,345 |   |   |  |

1 = Development of leases beneath these MAs is provided for from wells drilled from pads located outside the MA.

2 = This MA is comprised of private and state lands and minerals. BLM has no authority or control over well pad numbers or placement on private or state lands. The number of wells indicated are only an estimate based upon an average of four wells/square mile.

3 = Operators could be required to consider CPFs and/or pad drilling to allow for additional well pads to reduce unnecessary/undue MA impacts.

4 = More than 4 well pads/square mile could require operators to consider CPFs and/or pad drilling to allow for additional well pads to reduce unnecessary/undue MA impacts.

5 = More than 8 well pads/square mile could require operators to consider CPFs and/or pad drilling to allow for additional well pads to reduce unnecessary/undue MA impacts.

6 = Operators could be required to consider CPFs and/or pad drilling to allow for additional well pads to reduce unnecessary/undue MA impacts.

7 = If well pad thresholds are reached within a MA, a dry hole plugged and abandoned well pads, reclaimed (recontoured and seeded) for one full growing season, may be credited back to that MA. Successful revegetation is expected in 3 to 5 years. Well pad numbers represent the total per MA only based on an average number of well pads/square mile.

- Avoid disturbances on slopes (15 percent or greater unless otherwise specified) and on sensitive soils to prevent erosion, protect water quality and reduce impacts in sensitive viewsheds.
- Protect cultural/Native American sacred sites.
- Minimize impacts on recreation use and sensitive viewsheds.
- Continue maintenance of livestock grazing and trailing operations.

**Restrictions/Limitations:**

- As discussed in the DEIS, proposed and cumulative development (wells, access roads, pipelines, centralized production facilities (CPF),

compressors, etc.) within each MA would be reviewed at least annually within the context of the Adaptive Environmental Management (AEM) planning process. The AEM planning process (Carpenter, 1997) recognizes that "human interventions into natural systems seldom proceeds as originally planned. Scientific uncertainties prevent environmental impacts from being reliably and precisely predicted. Thus, the style of management must provide for monitoring to guide mid-course corrections in adapting to inevitable surprises." AEM is designed to address these types of concerns. As discussed in Appendix F of the DEIS, an AEM planning process increases the speed at which managers learn from their decisions about

resources and how development activities affect them. Monitoring will be developed to address both direct and cumulative impacts. All major road and pipeline plans may need to be reviewed by the Transportation Planning Committee to ensure their locations will result in the least impact.

- Prior to surface disturbing activity, site-specific environmental analysis of the action on the management objectives/resource values of the affected MA could be necessary.
- Where necessary, areas to be disturbed could require inventories or special studies to determine the extent of site-specific impacts and appropriate mitigation. Operators could be required to complete inventories or short-term special studies under guidelines provided by the BLM or as developed through the AEM planning process.
- As is discussed in Appendix A of the DEIS, if in the conduct of operations, threatened or endangered species, proposed or candidate species, paleontological values, objects of historic or scientific interest, or substantial unanticipated environmental effects (including cumulative) are observed, the operator would be required to immediately contact the BLM. BLM could require the operator to cease any operations that would result in the destruction of such species or objects.
- Each and every proposed action on Federal lands and minerals would be required to comply with the Mitigation Guidelines and Standard Practices for Surface-Disturbing and Disruptive Activities contained in Appendix A of the DEIS.
- BLM would require each right-of-way, Application for Permit to Drill or other application to include a reclamation plan in conformance with the Mitigation Guidelines and Standard Practices for Surface Disturbing and Disruptive Activities (see DEIS Appendix A, page A-14 and 15).
- BLM would require all aboveground facilities to be painted with appropriate nonreflective standard environmental colors specified by the BLM.
- Low profile tanks could be required wherever visual sensitivity is an issue and/or wherever deemed appropriate mitigation to help maintain the basic characteristics of the landscape. BLM could allow only low profile tanks north of the New Fork River and within the Lander Trail viewshed.
- BLM would require productive well locations and their access roads (including out slopes and back slopes) to be reclaimed (using a BLM-approved seed mix) by the fall or spring after the well has been drilled and brought on line.
- Best Management Practices (BMP's) could be required to control sediment from all construction sites. Because of concerns raised regarding potential sediment impacts, particularly to the New Fork and Green rivers, BLM could require operators to provide copies of Erosion Control, Revegetation, Restoration/Storm Water Pollution Prevention Plans prior to initiating any construction activities. Documentation of adequate monitoring and repair of storm water control structures may be required by BLM.
- BLM would prohibit well pads, access roads, or aboveground facilities from within 0.25 miles of a sage grouse lek. Further restrictions may be required if the species is determined by the U.S. Fish and Wildlife Service to be eligible for listing as either threatened or endangered pursuant to the Endangered Species Act. Monitoring could be required by BLM to determine which leks in the PAPA are active and which have been abandoned.
- Similarly, BLM would prohibit placement of well pads, access roads, or other aboveground facilities within 825 feet of an active raptor nest, 1,000 feet of a ferruginous hawk nest, and 2,000 feet of an eagle nest.
- To minimize visual impacts in Visual Resource Management (VRM) Class II or III areas, BLM could condition authorization of well pad locations, new roads, CPFs, buried pipelines, etc. upon the operator demonstrating to BLM's satisfaction that the location and/or facilities will be reasonably screened so as not to cause unnecessary visual impacts or attract the attention of the casual observer.
- BLM could require operator evaluation and consideration of the use of CPFs, particularly in the northern portion of the PAPA. Consequently, operator advanced planning for CPFs and gathering pipeline systems could be necessary. Where CPFs are planned, temporary surface pipelines may be required by BLM until the location of CPFs is determined. The AEM planning process will help provide information needed to determine the appropriateness and when and where CPFs should be installed.

### **2.3 Individual Management Area Objectives and Restrictions/Limitations**

In addition to the general objectives and restrictions/limitations listed above, BLM could adopt additional objectives and restrictions/limitations unique to each of the MAs shown on Figure 2-1. For purposes of soliciting public comment, Table 2-2 lists MA-specific objectives and restrictions/limitations that are possible for inclusion in the ROD.

**Table 2-2  
Individual Management Area Objectives and Restrictions/Limitations  
That Could be Included in the ROD**

| Management Area Objectives   | Possible Restrictions/Limitations   |
|--|---|
| <b>MA 1 - Lander Trail</b>   |   |
| Preserve the integrity of the trail and the trail viewshed.  | 1. In compliance with the existing Oregon/California Trail Management Plan, BLM could prohibit new disturbance of the trail on Federal lands and minerals except where existing improved roads and pipelines currently cross the trail.   |
|  | 2. To minimize impacts to the trail setting, BLM could prohibit construction activities within 0.25 miles of the trail on Federal lands and minerals, unless screened from the trail by topography.   |
|  | 3. In the trail viewshed (defined as up to 3 miles north of the trail and south of the trail to State Highway 351) beyond the current 0.25 mile protective buffer, BLM could require the completion of a visibility analysis so that well pads, access roads and pipelines can be located on Federal lands and minerals in a manner that minimizes their visibility from the trail to the extent practicable. Visibility analysis could involve completing a visual resource contrast rating (BLM Manual H-8431-1; Form 8400-4) and utilizing viewshed analyses, such as in Figure 3.11 of the DEIS, and/or visual simulation modeling to determine the best location to screen facilities. |
|  | 4. If extensive development occurs within the trail viewshed (i.e., more than 4 well pads/square mile) on Federal lands and minerals, CPFs or pad drilling may be required to eliminate tanks and other facilities from well locations visible from the trail.  |
| <b>MA 2 - Mesa Breaks</b>  |   |
| <p>Maintain the existing quality, suitability and habitat effectiveness of the Mesa Breaks deer crucial winter range. These breaks provide thermal cover and forage during severe winters.</p> <p>Retain the existing character of the landscape and sensitive viewshed.</p> <p>Avoid disturbance on slopes 10 percent or greater and on sensitive soils to prevent erosion and altering the sensitive viewshed.</p> | 1. To minimize impacts within the 7,366 Federal acres of highly sensitive habitat, soils, viewshed, and seasonal recreation use area, BLM could prohibit placement of any well pads or new access roads within the breaks on Federal lands and minerals.  |
|  | 2. BLM could require the Transportation Planning Committee to review all new proposed pipeline routes through the breaks on Federal lands and minerals and submit recommendations to the BLM on the location considered the most environmentally acceptable. BLM could continue to enforce current seasonal restrictions on construction of pipelines in the breaks.  |
| <b>MA 3 - Unleased Federal Minerals</b>  |   |
| These Federal minerals have been closed to mineral lease. They include Federal minerals under the industrial park west of Pinedale, several tracts near Boulder that were withdrawn at the request of the Department of Defense, Native American sensitive sites, etc. The management objective of this MA could be to continue to hold these parcels closed to development.   |   |

**Table 2-2  
Continued**

| Management Area Objectives   | Possible Restrictions/Limitations   |
|--|---|
| <b>MA 4 - Sensitive Viewshed</b>   |   |
| <p>Protect the sensitive viewshed by retaining the existing character of the landscape.</p> <p>Protect/maintain winter and crucial winter deer range.</p> <p>Protect and maintain existing raptor nesting habitat.</p>   | <ol style="list-style-type: none"> <li>1. To minimize impacts in this MA, BLM could restrict the <u>average</u> number of well pads within this MA on Federal lands and minerals to no more than two/square mile (or 28 total well pads on Federal lands and minerals within the MA) and restrict the <u>maximum</u> to no more than four well pads/square mile. However, centralized production could be used to allow for additional well pads if no additional impacts to the management objectives are predicted to occur.</li> <li>2. To the extent practicable, the installation of CPFs and/or employment of pad drilling could be required by BLM on Federal lands and minerals to screen tanks, other facilities and road and pipeline disturbance that could degrade the visual quality of the landscape from view points within the town of Pinedale, adjacent housing development areas and portions of U.S. Highway 191.</li> <li>3. BLM could condition approval of well pad locations, new roads, or buried pipelines upon the operator developing a plan, acceptable to BLM, for the mitigation of anticipated impacts.</li> <li>4. Planning for wells within this MA could require additional public involvement and monitoring under the AEM planning process. Proposed project development (e.g., well pad, pipeline, CPFs, etc.) may require site-specific NEPA analysis that addresses wildlife, soils, visibility, recreation and any other affected resources.</li> <li>5. BLM could require avoidance of disturbance on slopes 10 percent or greater on the face of the Mesa and on highly erosive soils or soils with a high degree of color contrast to prevent erosion, water quality degradation and visual contrast from disturbance.</li> </ol> |
| <b>MA 5 - Big Game Winter Range and Sage Grouse Strutting and Nesting Habitat</b>  |   |
| <p>Limit surface disturbance and human activity which could displace deer and antelope from winter ranges and sage grouse from strutting and nesting habitat resulting in mortalities and reduced population levels.</p> <p>Implement measures to screen activities and facilities so they do not attract the attention of a casual observer in VRM Class III areas on either side of the New Fork and Green Rivers (see DEIS Figure 3-9).</p> | <ol style="list-style-type: none"> <li>1. To minimize impacts within this 67,801 acre big game and sage grouse crucial habitat and visually sensitive area, BLM could limit the <u>average</u> number of well pads to no more than two/square mile (or a total of 212 pads within the entire MA). BLM could allow from 0 up to 16 well pads/square mile to be constructed and drilled in any given section, but the total for this MA may not exceed 212 pads.</li> <li>2. More than 4 well pads/square mile could require the operators to consider pad drilling or the installation of CPFs on Federal lands and minerals. BLM could require the operators to demonstrate why either pad drilling or the installation of CPFs could not be used to eliminate production facilities (tanks, dehydration units, etc.) that require daily and weekly maintenance traffic at individual well locations. The DEIS demonstrates that it is desirable to reduce the effects of human activity upon wintering mule deer and sage grouse breeding and nesting. BLM may also determine the appropriateness of requiring pad drilling or CPFs based upon the results of monitoring and evaluation of resource impacts.</li> </ol>  |

**Table 2-2  
Continued**

| Management Area Objectives  | Possible Restrictions/Limitations   |
|---|---|
|   | 3. To minimize impacts on Federal lands and minerals in the VRM Class III viewshed, BLM could condition approvals for well pad locations, new roads, CPFs, buried pipelines, compressor stations, etc. upon the operator developing a plan, demonstrating to BLM's satisfaction that the location and/or facilities will reasonably and practicably meet VRM Class III management objectives.   |
|   | 4. Planning for project development within this MA could be processed on a case-by-case basis and may require periodic monitoring under the AEM planning process.   |
|   | 5. Proposed project development on Federal lands and minerals within MA-5 could require site-specific environmental analysis that addresses the impacts of the proposal on, among other resources, mule deer and antelope crucial winter range use, sage grouse strutting and nesting, highly erodible soils, and VRM Class II and III areas. Such environmental analysis may be used to locate well pads, access roads, pipelines, production facilities, CPFs, compressors, etc., in a manner that minimizes impacts to wildlife, protects erodible soils, and screens the disturbance and facilities, to the extent reasonable and practicable, from the view of residences and recreation activity along the Green and/or New Fork rivers, Highways 191 and 351 and to determine any necessary seasonal use restrictions. |
| <b>MA 6 - Sage Grouse Strutting and Nesting Habitat</b>   |   |
| <p>Protect this area from unnecessary surface disturbance and human activities which could displace sage grouse from crucial strutting and nesting habitat resulting in mortalities and reduced population levels.</p> <p>Avoid activities and facilities that create barriers to the seasonal movements of antelope.</p> <p>Partially retain the existing character of the landscape, on each side of U.S. Highway 191, by implementing measures to screen activities and facilities so they do not dominate the view of the casual observer and to replicate the existing characteristics of the landscape.</p> | 1. To minimize impacts within the 39,205 Federal acres of sage grouse crucial habitat, antelope migration corridor, and VRM Class III area, BLM could limit the <u>average</u> number of well pads to no more than three/square mile (or 183 producing pads within the entire MA). From 0 up to 16 well pads/square mile could be constructed and drilled, but the total for this MA could not exceed 183 pads.   |
|   | 2. If it becomes necessary to develop more than eight pads/square mile on Federal lands and minerals, BLM could require the operators to demonstrate why pad drilling or the installation of CPFs cannot be used to eliminate daily and weekly maintenance traffic at individual well locations. This will reduce the effects of human activity upon sage grouse breeding and nesting. BLM could also base the appropriateness of pad drilling or CPFs upon the results of monitoring and evaluation of resource impacts.   |
|   | 3. To minimize impacts on Federal lands and minerals in the VRM Class III viewshed, BLM could condition approval of well pad locations, new roads, pad drilling sites, CPFs, buried pipelines, etc. on the operator demonstrating to BLM's satisfaction that the location and/or facilities will reasonably and practicably meet VRM Class III management objectives.   |

**Table 2-2  
Continued**

| Management Area Objectives   | Possible Restrictions/Limitations  |
|--|--|
|  | <p>4. Proposed project development within MA-6 could require site-specific environmental analysis addressing, among other resources, antelope crucial winter range use, sage grouse strutting and nesting, and VRM Class III visual impacts to best locate well pads, access roads, pipelines, production facilities, CPFs, compressors, etc., in a manner that minimizes impacts to wildlife and screens the disturbance and facilities, to the extent reasonable and practicable, from the view of U.S. Highway 191 and State Highway 351.</p>   |
| <b>MA 7 - Ross Butte/Blue Rim</b>  |  |
| <p>Avoid disturbance to the fossil-bearing formations on a site-specific basis and protect paleontological fossil resources.</p> <p>Avoid disturbance on highly erodible soils and maintain soil stability and productivity.</p> <p>Protect and maintain existing raptor nesting habitat.</p> <p>Protect sensitive plant species.</p> <p>Protect the visual quality of the unique badland area.</p>  | <p>1. To minimize impacts within the 10,953 Federal acres of fossil-bearing formations, highly erodible soils, raptor nesting habitat, and sensitive plant species, the BLM could limit the <u>average</u> number of well pads to no more than four/square mile (or 68 pads in the entire MA). BLM could allow from 0 up to 16 well pads/square mile to be constructed and drilled in any given section, but the total for this MA could not exceed 68 pads.</p> <p>2. Operators on Federal lands and minerals within MA-7 could be required to consider pad drilling or the installation of CPFs to reduce and minimize impacts to nesting raptors and eliminate daily and weekly maintenance traffic at individual well locations. This could reduce the effects of human activity upon raptor nesting documented in the DEIS. The appropriateness of pad drilling or CPFs could also be based upon the results of monitoring and evaluation of resource impacts.</p> <p>3. Proposed project development could require site-specific environmental analysis addressing, among other resources, paleontological values (an on-site paleontological assessment may be required), raptor nesting and breeding, erodible soils, visual quality of the badlands, and any other affected resource impacts to best locate well pads, access roads, pipelines, production facilities, CPF's, compressors, etc., in a manner that minimizes impacts to the raptors, highly erodible soils, and provides for the collection and interpretation of paleontological resources.</p> |
| <b>MA 8 - Minimal Conflict Area</b>  |  |
| <p>Maintain antelope summer range and avoid activities and facilities that will create barriers to the seasonal movements of antelope.</p> <p>Avoid highly erodible soils.</p> <p>Partially retain the existing character of the landscape, on each side of U.S. Highway 191 (classified as VRM Class III), by implementing measures to screen activities and facilities so they do not dominate the view of the casual observer and to replicate the existing characteristics of the landscape.</p> | <p>1. To minimize impacts within the 26,605 Federal acres of antelope summer range and migration corridor, VRM Class III area, and other uses, the average number of well pads could be restricted to no more than four/square mile or 168 pads. From 0 up to 16 well pads/square mile could be constructed and drilled in any given section, but the total for this MA could not exceed 168 pads.</p>   |

**Table 2-2  
Concluded**

| Management Area Objectives      | Possible Restrictions/Limitations   |
|---------------------------------|---|
| <b>MA 9 - Non-Federal Lands</b> |   |
|                                 | <p>This MA of 31,925 acres includes private and state lands not under the jurisdiction of the BLM. It is assumed that the number of well pads on private and state lands would average four/square mile or 200 pads. From 0 up to 16 well pads/square mile could be constructed and drilled in any given section.</p> <p>Lands along the rivers include most of the wetland/riparian areas found in the PAPA, farm and ranch lands, and 100-year flood plains for the New Fork and Green rivers. The COE regulates the discharge of dredged or fill materials into waters of the United States, and would require operators to demonstrate that impacts to special aquatic sites, including wetlands, have been avoided and minimized to the maximum extent practicable. The U.S. Fish and Wildlife Service administers migratory bird species, threatened and endangered species, and species that are proposed for listing.</p> <p>BLM cannot impose management objectives or restrictions/limitations on these lands. However, it was suggested during the public workshops that the operators voluntarily adopt the interrelated and interdependent objectives for these areas. Recommendations included maintenance, improvement and restoration of riparian habitat to provide enhanced wildlife and livestock forage/habitat; avoidance of disturbance to scrub-shrub or forested wetland types to protect water quality; survey for cultural and Native American sacred sites; cooperation with private landowners to avoid impacts to area residences; protecting raptor nesting habitat; and continuing the maintenance of livestock grazing and trailing operations.</p> |